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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PARTON, KEVIN S

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/585,945

Applicant(s)

TURNIDGE, TODD D.

Examiner

Kevin Parton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01/20/2004 have been fully considered but they are not persuasive. Please see the following reasons and the grounds of rejection below.
2. Regarding claim 1 and specifically the Canon reference, the applicant argues that the reference does not teach a browsable VM that "serves as a 'window into the state and performance of the underlying virtual machine by handling queries relating to the virtual machine and wherein the reply [from the web server] provides insight into or effects the operation of the virtual machine" (page 6, paragraph 4). The argument is not persuasive because these limitations are not expressly included in the claims. The claim as written is anticipated by the Canon reference. Specifically, Canon does teach a virtual machine that handles queries about its operation. In the specific instance, the virtual machine in question is a simulation of an actual device. Since the claim does not define the virtual machine or the types of information being requested, any type of virtual machine is considered.
3. The applicant further argues that "Canon's virtual machine is more accurately characterized as a virtual model" (page 7, paragraph 1). Regardless of semantics chosen by the applicant, the system of Canon is a virtual machine that is queried and replies with insight into its operation just as claimed in the present application.
4. Regarding claims 1-10, 12-18, and 22-26, the applicant again argues that the reference does not teach a browsable VM that "serves as a 'window into the state and performance of the underlying virtual machine by handling queries relating to the virtual machine and wherein the reply [from the web server] provides insight into or effects the operation of the virtual machine"

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(page 7, paragraph 5). Again, the argument is not persuasive because this limitations is not expressly included in the claims. Additionally, the reference to Beadle et al. (USPN 6,433,794) anticipates the claim because it does provide a query handler that replies with insight into the operation of a virtual machine. Specifically, it can reply with a list of available virtual machines upon request. It provides a request handler, services for replying to queries, and means for constructing output that provides insight into the operation of the virtual machine. This anticipates the current claims.

5. All further arguments are not persuasive for the same reasons shown above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Canon et al. (1979).
8. Regarding claim 1, Canon et al. (1979) teach a virtual machine configured to function as a browsable virtual machine (VM), the virtual machine comprising:

- a. A request handler worker for handling queries relating to the virtual machine (page 77, column 1, paragraph 6).
- b. A plurality of services wherein a service performs operations for replying to an incoming query (page 77, column 1, paragraph 6)
- c. An operations worker for constructing output containing a reply to the incoming query, wherein the reply only provides insight into or effects the

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operation of the virtual machine (page 77, column 1, paragraph 6; Table I).

Note that in the reference, the virtual machine (VM) receives work instructions and replies with operation statistics giving insight into the operation of the VM.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-10, 12-18, and 22-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Beadle et al. (USPN 6,433,794).

11. Regarding claim 1, Beadle et al. (USPN 6,433,794) teach a virtual machine configured to function as a browsable virtual machine (VM), the virtual machine comprising:

- a. A request handler worker for handling queries relating to the virtual machine (column 6, lines 13-18).
- b. A plurality of services wherein a service performs operations for replying to an incoming query (column 6, lines 13-24, 46-50).
- c. An operations worker for constructing output containing a reply to the incoming query, wherein the reply only provides insight into or effects the operation of the virtual machine (column 6, lines 46-50).

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12. Regarding claim 2, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the request handler worker is an http thread (figure 4; column 5, lines 58-61).

13. Regarding claim 3, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 2. They further teach means wherein the incoming query is in http format (figure 4; column 5, lines 58-61).

14. Regarding claim 4, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the request handler worker further includes a query parser for parsing the incoming query such that one of the plurality of services is identified for use by the operations worker to generate the reply to the incoming query (column 6, lines 13-24, 46-50). Note that the worker of the reference parses a request and returns a result.

15. Regarding claim 5, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the request handler worker is created upon starting up the virtual machine (column 6, lines 13-24, 46-50). Please note that the request handler is part of the VM so it must be available at start up.

16. Regarding claim 6, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the request handler worker functions as a network traffic manager for routing queries and responses (column 6, lines 13-24, 46-50). Note that in the reference, requests are routed for a specific machine.

17. Regarding claim 7, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the plurality of services contains an index of available services and parameters for each service (column 6, lines 46-50).

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18. Regarding claim 8, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the operation worker is a virtual machine operations thread (column 6, lines 13-24, 46-50).

19. Regarding claim 9, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach a request data structure for transferring data between the request handler worker and the operations worker (column 6, lines 13-24, 46-50).

20. Regarding claim 10, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 9. They further teach means wherein the request handler worker creates the request data structure that identifies one of the plurality of services to be used by the operations worker for generating the reply to the incoming query (column 6, lines 46-52).

21. Regarding claim 12, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 1. They further teach means wherein the virtual machine is a Java virtual machine (figure 4, element 408).

22. Regarding claims 13 and 26, Beadle et al. (USPN 6,433,794) teach a system for handling an incoming query to a virtual machine configurable to function as a browsable virtual machine (VM) with means for:

- a. Invoking a network traffic worker for receiving the request (column 6, lines 13-18, 46-50).
- b. Receiving a request from a browser (column 6, lines 13-18).
- c. Processing the request to determine a service needed to respond to the request (column 6, lines 46-52).

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- d. Creating a request data structure identifying the service needed to respond to the request (column 6, lines 13-18, 46-52).
- e. Effecting a response to the request by passing the request data structure to a virtual machine operations worker, wherein the response only provides insight into or effects the operation of the virtual machine (column 6, lines 46-50).
- f. Transmitting the response to the browser (column 6, lines 46-50).

23. Regarding claim 14, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 13. They further teach means for invoking a web server in the virtual machine (figure 4).

Note that in the reference, the JVM provides a service via the web, it is a web server.

24. Regarding claim 15, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 14. They further teach means for creating a request thread (column 6, lines 13-18, 46-50).

25. Regarding claim 16, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 15. They further teach means wherein receiving a request from a browser further includes establishing a secure http connection where the request is an http request (figure 4; column 5, lines 58-61).

26. Regarding claim 17, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 13. They further teach means wherein processing the request further includes parsing the request into segments thereby determining the service needed to respond to the request (column 6, lines 46-52). Note that the VMs could be in different machines and the request must be parsed.

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27. Regarding claim 18, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 17. They further teach means for creating a pointer to the service in a service library (column 6, lines 46-50).

28. Regarding claim 22, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 13. They further teach means for performing operations in the virtual machine using the service and under the control of the virtual machine operations worker (column 6, lines 13-18, 46-52).

29. Regarding claim 23, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 13. They further teach means for stopping normal operation of the virtual machine while the request is acted on (column 6, lines 13-26).

30. Regarding claim 24, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 13. They further teach means for sending a response from the virtual machine operations worker to the network traffic worker (column 6, lines 13-24, 46-52).

31. Regarding claim 25, Beadle et al. (USPN 6,433,794) teaches all the limitations as applied to claim 13. They further teach means wherein transmitting the response to the browser further includes the network traffic manager sending the response to the browser (column 6, lines 13-24, 46-52).

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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33. Claims 11 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beadle et al. (USPN 6,433,794).

34. Regarding claim 11, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 9. They further teach means for identifying the one of the plurality of services to be used by the operations worker for generating the reply to the incoming query (column 6, lines 46-50).

Although the system disclosed by Beadle et al. (USPN 6,433,794) shows substantial features of the claimed invention, it fails to disclose specifically means wherein the request data structure has a service pointer area, a response buffer area, and a segment query area.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Beadle et al. (USPN 6,433,794).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Beadle et al. (USPN 6,433,794) by employing the use of a service pointer area, response buffer, and segment query area in a request. These would all be useful in the return of data because each request will need to specify at least the service needed and the space for a reply. This benefits the system by allowing for a standardized request structure.

35. Regarding claim 19, although the system disclosed by Beadle et al. (USPN 6,433,794) shows substantial features of the claimed invention, it fails to disclose specifically means wherein creating the request data structure includes creating a service pointer area, a response buffer area, and a segment query area.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Beadle et al. (USPN 6,433,794).

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A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Beadle et al. (USPN 6,433,794) by employing the use of a service pointer area, response buffer, and segment query area in a request. These would all be useful in the return of data because each request will need to specify at least the service needed and the space for a reply. This benefits the system by allowing for a standardized request structure.

36. Regarding claim 20, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 19. They further teach means for generating an HTTP response containing an HTML document (figure 4; column 5, lines 58-61).

Although the system disclosed by Beadle et al. (USPN 6,433,794) shows substantial features of the claimed invention, it fails to disclose means wherein the response is stored in a third storage area of a request data structure.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Beadle et al. (USPN 6,433,794).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Beadle et al. (USPN 6,433,794) by employing a request data structure with placement specified for the result. This benefits the system by providing a common space for the result into a known format. In addition, the size of the result can be controlled thus not taking up more bandwidth than allowed.

37. Regarding claim 21, Beadle et al. (USPN 6,433,794) teach all the limitations as applied to claim 19. They further teach means for generating XML pages into the third storage area of the request data structure (figure 4; column 5, lines 58-61). Note that in the reference, the html

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references are used over the web via http. XML is just another markup language that can be used in web client server systems.

Conclusion

38. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Parton whose telephone number is (703)306-0543. The examiner can normally be reached on M-F 8:00AM - 4:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703)305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Parton
Examiner
Art Unit 2153

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